

Application No. 10/776,727

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10/776,727-1-521**REMARKS**

Reconsideration of all grounds of rejection in the Office Action and allowance of the pending claims are respectfully requested in light of the following remarks. Claims 1-9 remain pending herein. Claim 1 is an independent claim.

The Abstract has been edited to be within the specified maximum length and in narrative form.

Claims 7 and 8 have been amended to overcome the objections thereto.

Claim 9 stands rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Claims 1 and 3-7 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Applicant's Admitted Prior Art (AAPA) in view of McAlpine (U.S. Pat. Appln. Pub. No. 2002/0141427). Claim 2 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over AAPA in view of McAlpine, as applied to claim 1, and further in view of King *et al.* (U.S. 6,314,106) ("King"). Claim 8 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over AAPA in view of McAlpine, as applied to claim 1, and further in view of Feig *et al.* (U.S. Pat. Appln. Pub. No. 2002/0085713) ("Feig"). Claim 9 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over AAPA in view of McAlpine, as applied to claim 1, and further in view of Osborne (U.S. 6,032,179). Applicant respectfully traverses these grounds of rejection for the reasons indicated herein below.

Claim 9 has been amended to overcome the rejection under 35 U.S.C. §112, second paragraph, by referring to step (e) and reciting that a status of the first buffer is checked while transferring the data frames in the second and third buffer, and the

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transference to the second and third buffer is interrupted if it is determined that the data frame exceeds the low water mark in the first buffer; support for this change is found in the specification at least at page 16, lines 13-19, and shown in FIG. 7.

Applicant respectfully submits that claim 9, particularly as amended, is definite and in compliance with 35 U.S.C. §112. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

With regard to the rejections under 35 U.S.C. 103(a), claim 1 has been amended to recite in part:

providing a First In First Out (FIFO) scheduler for the first, second and third buffers, respectively; said FIFO scheduler performing a FIFO scheduling for said first, second and third buffers in sequence while utilizing a High Priority First Allocation (HPFA) algorithm in a round robin system;

(a) determining whether there is at least one data frame to transfer in the first buffer, said first buffer comprising a highest priority data buffer relative to said second buffer and said third buffer.

Support for the above amendments to claim 1 is found in the specification at least at page 12, line 21, to page 13, line 10, and shown in FIG. 4.

The present claimed invention is an improvement over prior systems for at least the reason that there is a FIFO scheduler (220, 320, 420) provided in the ONU for performing FIFO scheduling utilizing a High Priority First Allocation (HPFA) algorithm in a round robin system, and the first buffer comprising a highest priority data buffer relative to the second buffer and third buffer.

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One of the advantages of the presently claimed invention is that the scheduler is adapted for determining the order of data transfer and on the basis of such determination, performing a scheduling for upstream traffic control while taking into account the data storage capacity to ensure the minimum transfer traffic allowed, as well as the priority of queues according to the required service characteristics relative to the respective data frames, so that all the traffic situations for queues can be considered during the data transfer. The present invention overcomes the problem of lower priority queues not having a stable data transfer. In other words, the present invention prevents the penalty phenomenon occurring in effecting upstream data transfer on the basis of the HPFA algorithm.

Applicant respectfully submits that the combination of the AAPA and McAlpine does not disclose nor would have otherwise rendered any of the present claims obvious at the time of invention to a person of ordinary skill in the art. Nor would the combination of elements, as recited in the claims, have been obvious to a person of ordinary skill as being within the ordinary level of skill in the art (*KSR International v. Teleflex*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007)).

For at least the above reasons, Applicants respectfully submit that claims 1 and 3-7 would not have been obvious to a person of ordinary skill in the art at the time of invention in view of the combination of AAPA and McAlpine. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

With regard to the rejection of claims 2, 8 and 9, Applicant respectfully submits that the addition of King, Feig or Osborne to the combination of AAPA and McAlpine still fails to render obvious even independent claim 1. None of the combinations disclose

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or render obvious, for example, claim 1 at least because the combinations are silent regarding a FIFO scheduler function as recited in the present claims.

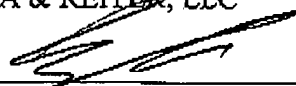
For all the foregoing reasons, Applicant respectfully submits that claims 1-9 would not have been obvious to a person of ordinary skill in the art in view of the cited references. Nor would the combination of elements, as recited in claims 1-9, have been obvious to an artisan as being within the ordinary level of skill in the art (*KSR International v. Teleflex*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007)).

Applicant respectfully submits that for all the foregoing reasons, all grounds of objection and rejection in the Office Action are overcome. A Notice of Allowance is respectfully requested.

In the event that any additional fee is required to continue the prosecution of this Application as requested, please charge such fee to Deposit Account No. 502-470. If the Examiner has any questions regarding this Application, it is respectfully requested that the Applicant's attorney of record be contacted at the below-noted telephone number.

Respectfully submitted,

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